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Attitude of the respondents about services of ATMA programme in East Champaran district of Bihar

Sushmita and Dipak Kumar Bose

Abstract

The study was conducted in the East Champaran district of Bihar to determine the attitude of respondents about services of ATMA programme on both its beneficiaries and non-beneficiaries. Five villages under the Motihari block were chosen randomly, and a total of 120 respondents (60 beneficiaries and 60 non-beneficiaries) were selected randomly for the study. Data was collected using a pre-structured interview schedule through personnel interview, and the results were analysed using appropriate statistical methods. The study found that young-aged individuals were the largest group among both beneficiaries (46.67%) and non-beneficiaries (45.00%). The majority of respondents had small land holdings (51.67%) among the beneficiaries and non-beneficiaries (58.33%). Medium income individuals were the largest group among beneficiaries (73.33%) and non-beneficiaries (63.33%). Attitude of farmers towards services of ATMA on its beneficiaries was found to be at a medium level 53.33 per cent, while in the case of non-beneficiaries, it was 45.00 per cent. The study also found that age, family type, family size, education, land holding, annual income, social participation and management orientation were positively and significantly correlated with the attitude of farmers towards services of ATMA on both its beneficiaries and non-beneficiaries.

Keywords: Attitude, ATMA, beneficiaries

Introduction

Agricultural Technology Management Agency (ATMA) scheme was launched in 2005. India's agricultural extension system is seen many innovations since its evolution. Since independence, the extension system has focused on four major strategies, reflecting the dominant agricultural and rural development goals during each period. Looking back, the evidence suggests that investments in agricultural research and extension have served the country well, particularly in achieving the food self-sufficiency.

The concept of Agriculture Technology Management Agency (ATMA) has been initiated in 1999 by Ministry of Agriculture, GOI under the NATP. ATMA is an autonomous organization facilitated by National Agricultural Technology Project (NATP) with an objective of integrating research and extension work with the help of stake holders for enhancing the agriculture production including the marketing access, capacity building and empowerment of the farmer for sustainable agriculture development. The concept of ATMA envisages paradigm shift from "top down" to "bottom up" in planning and implementation of agriculture development programmes.

Under ATMA several extension programs are organized and these include training, demonstrations, farm schools, and exposure visits. As per ATMA Guidelines, 30% of the beneficiaries in the programs have to be women. Krishi Vigyan Kendra (KVKs), which are funded by the Indian Council of Agricultural Research (ICAR), organize vocational training for youth, farmers, and rural women. Women do participate in many of these trainings but there is a wide variation across KVKs in this regard.

The farmers have lack of training on improved technology, inadequate financial support under the ATMA programme, no proper planning in input distribution and no training programmes on ICT and its applications. The findings of the study can also provide feedback on the effectiveness of ATMA as the new extension system in India, in general as well as in Bihar

states in which the study was conducted, in particular. It can also provide useful guidance for understanding of various programmes implemented under ATMA.

Research Methodology

EX-post facto research design was used for the study as it describes the characters that are being studied. The present study has been conducted in East Champaran district of Bihar. Out of 27 blocks in East Champaran district, Motihari block has been chosen purposively based on the maximum respondents are using Agricultural Technology Management Agency (ATMA) services among the all blocks of the district. From selected block, five villages were selected randomly and from there a total number of 120 respondents (60

beneficiaries and 60 non-beneficiaries) were selected who were using Agricultural Technology Management Agency (ATMA) services.

Objectives of the study

1. To assess the socio-economic and psychological attributes of the beneficiaries and non-beneficiaries.
2. To determine the attitude of the respondents about services of ATMA programme.
3. To find out the association between selected independent variables with dependent variables.

Results and Discussion

Table 1: Socio-economic profile of the respondents

S.NO.	Independent variables	Category	Beneficiaries		Non-Beneficiaries	
			Frequency	Percentage	Frequency	Percentage
1.	Age	Young (Below 35 years)	27	45.00	28	46.67
		Middle (36-55 years)	23	38.33	25	41.67
		Old (above 55 years)	10	16.67	7	11.67
2.	Caste	Gen.	30	50.00	33	55.00
		OBC	22	36.67	24	40.00
		SC/ST	8	13.33	7	11.67
3.	Family type	Nuclear	33	55.00	37	61.67
		Joint	27	45.00	23	38.33
4.	Family size	Small (1 to 4)	5	8.33	8	13.33
		Medium (5 to 8)	47	78.33	37	61.67
		Large (9 above)	8	13.33	15	25.00
5.	Types of houses	Hut	12	20.00	3	5.00
		Semi-cemented	21	35.00	20	33.33
		Cemented	27	45.00	38	63.33
6.	Education	Illiterate	4	6.67	5	8.33
		Primary school education	21	35.00	23	38.33
		High school education	18	30.00	15	25.00
		Intermediate	11	18.33	10	16.67
		Graduate	4	6.67	3	5.00
7.	Occupation	Post Graduate	2	3.33	4	6.67
		Only farming	29	48.33	30	50.00
		Farming + Business	22	36.67	22	36.67
		Farming + Service	9	15.00	8	13.33
		Marginal (<1 ha)	15	25.00	12	20.00
8.	Land holding	Small (1-2 ha)	31	51.67	35	58.33
		Medium (2-3 ha)	11	18.33	11	18.33
		Large (4> ha)	3	5.00	2	3.33
		Rarely (4-6)	11	18.33	13	21.67
9.	Extension contacts	Sometimes (7-9)	32	53.34	25	41.67
		Frequently (10-12)	17	28.33	22	36.67
		Low (7-10)	12	20.00	8	13.33
10.	Social participation	Medium (11-13)	28	46.67	22	36.67
		High (14-16)	20	33.33	30	50.00
		Low (below 1 lakh)	12	20.00	9	15.00
11.	Annual income	Medium (1-2 lakh)	44	73.33	38	63.33
		High (Above 2 lakh)	4	6.67	13	21.67
		Low (10-11)	8	13.33	15	25.00
12.	Management orientation	Medium (12-13)	39	65.00	23	38.33
		High (14-15)	13	21.67	22	36.67
		Low (6-10)	6	10.00	6	10.00
13.	Economic motivation	Medium (11-14)	21	35.00	16	26.67
		High (15-18)	33	55.00	35	58.33
		Low (11-12)	2	10.00	7	11.67
14.	Innovativeness	Medium (13-14)	21	31.67	20	33.33
		High (14-16)	37	58.33	33	55.00

From the table 1, it shows that 45.00 per cent of beneficiaries respondents and 46.67 per cent of non-beneficiaries respondents belong to the young age group. It is clearly visible that 35.00 per cent of beneficiaries respondents and

38.33 per cent of non-beneficiaries respondents get primary school education. It can be significantly seen that majority of the respondents i.e., 48.33 per cent of respondents are beneficiaries and 50.00 per cent of respondents are non-

beneficiaries are having only agriculture only as their occupation. It is obtained from the table 1 that 45 per cent of the respondents are beneficiaries and 63.33 per cent respondents are non-beneficiaries who live in cemented houses. In terms of land holding 51.67 per cent are beneficiaries respondents and 58.33 per cent are non-beneficiaries have small i.e., 1-2 ha. land and 73.33 per cent of the respondents are beneficiaries and 63.33 per cent are non-beneficiaries who have medium level of annual income (i.e.,1-2 lakh). It is also evident that 53.34 per cent beneficiaries and 41.67 per cent non-beneficiaries get extension contact sometimes. It is clearly visible in table 1

that 65.00 per cent of the respondents are beneficiaries and 38.33 per cent are non-beneficiaries who have medium level of management orientation and 46.67 per cent of the respondents are beneficiaries who have medium level and 50.00 per cent are non-beneficiaries have high level of social participation. It is depicted that 55 per cent beneficiaries and 58.33 per cent non-beneficiaries show high level of economic motivation and 58.33 per cent of the respondents are beneficiaries and 55.00 per cent are non-beneficiaries show high level of innovativeness. Similar finding is also reported by Mandal and Jirli (2018).

Table 2: Attitude of the respondents towards services of ATMA activities

S.no.	Statement	Beneficiaries			Non-Beneficiaries		
		AG F (%)	UD F (%)	DA F (%)	AG F (%)	UD F (%)	DA F (%)
1.	ATMA Programme imparts knowledge in adopting advanced production technology in Agriculture.	36 (60%)	16 (26.66%)	8 (13.33%)	34 (56.66%)	17 (28.33%)	9 (15%)
2.	Only few selected farmers benefit from the ATMA Programme.	42 (70%)	13 (21.66%)	5 (8.33%)	39 (65%)	15 (25%)	6 (10%)
3.	Many farmers are not able to get the benefit of ATMA programme due to lack of publicity.	46 (76.66%)	11 (18.33%)	3 (5%)	42 (70%)	9 (15%)	9 (15%)
4.	The benefits and facilities derived from the spirit programme are unlikely to be issued.	45 (75%)	10 (16.66%)	5 (8.33%)	44 (73.33%)	9 (15%)	7 (11.66%)
5.	Farmer new farming system adoption has increased productivity through the ATMA programme.	48 (80%)	8 (13.33%)	4 (6.66%)	45 (75%)	8 (13.33%)	7 (11.66%)
6.	Implementation of ATMA programme is not being done at right time and right method.	38 (63.33%)	16 (26.66%)	6 (10%)	38 (63.33%)	17 (28.33%)	5 (8.33%)
7.	Farmers are having difficulties in getting benefits in the ATMA programme.	41 (68.33%)	12 (20%)	7 (11.66%)	38 (63.33%)	13 (21.66%)	9 (15%)
8.	In the ATMA Programme, there is man expenditure and less profit when disciplined by the broadcast worker.	38 (63.33%)	13 (21.66%)	9 (15%)	39 (65%)	15 (25%)	6 (10%)
9.	ATMA programme has encouraged new agricultural method.	48 (80%)	7 (11.66%)	5 (8.33%)	46 (76.66%)	9 (15%)	5 (8.33%)
10.	ATMA programme has been successful after scientific technical challenges.	49 (81.66%)	8 (13.33%)	3 (5%)	46 (76.33%)	9 (15%)	5 (8.33%)
11.	Advanced technology is responsible for increasing production capacity which is part of ATMA programme.	49 (81.66%)	8 (13.33%)	3 (5%)	41 (68.33%)	15 (25%)	4 (6.66%)
12.	The village can be made self-dependent in the agriculture sector through the ATMA programme.	48 (80%)	8 (13.33%)	4 (6.66%)	43 (71.66%)	12 (20%)	5 (8.33%)
13.	New and improve farmers can be gated with the facilities obtained from the ATMA Programme.	44 (73.33%)	10 (16.66%)	6 (10%)	39 (65%)	11 (18.33%)	10 (16.66%)
14.	Farmers on given knowledge about certain crops through the ATMA programme.	45 (75%)	11 (18.33%)	4 (6.66%)	39 (65%)	13 (21.66%)	7 (11.66%)
15.	The ATMA Programme helps farmer as a charity.	44 (73.33%)	12 (20%)	4 (6.66%)	38 (63.33%)	12 (20%)	10 (16.66%)

The figure shown in parenthesis are percentage. The above table no. 2 proves that 60.00 per cent beneficiaries and 56.66 per cent non-beneficiaries of the respondents agree that ATMA Programme imparts knowledge in adopting advanced production technology in Agriculture. 70.00 per cent beneficiaries and 65.00 per cent non-beneficiaries of the respondents agree that only few selected farmers benefit from the ATMA Programme. 76.66 per cent beneficiaries and 70.00 per cent non-beneficiaries of the respondents agree that many farmers are not able to get the benefit of ATMA programme due to lack of publicity. 75.00 per cent beneficiaries and 73.33 per cent non-beneficiaries agree that the benefits and facilities derived from the spirit programmes are unlikely to be issued. 80.00 per cent beneficiaries and 75.00 per cent non-beneficiaries of the respondents agree that farmer’s new farming system adoption has increased productivity through the ATMA programme. 63.33 per cent beneficiaries and 63.33 per cent non-beneficiaries of the

respondents agree that implementation of ATMA programme is not being done at right time and right method. 68.33 per cent beneficiaries and 63.33 per cent non-beneficiaries of the respondents agree that farmers are having difficulties in getting benefits in the ATMA programme. 63.33 per cent beneficiaries and 65.00 per cent non-beneficiaries of the respondents agree that in the ATMA programme, there is man expenditure and less profit when disciplined by the broadcast worker. 80.00 per cent beneficiaries and 76.66 per cent non-beneficiaries of the respondents agree that ATMA programme has encouraged new agricultural method. 81.66 per cent beneficiaries and 76.33 per cent non-beneficiaries of the respondents agree that ATMA programme has been successful after scientific technical challenges. 81.66 per cent beneficiaries and 68.33 per cent non-beneficiaries of the respondents agree that advanced technology is responsible for increasing production capacity which is part of ATMA programme. 80.00 per cent beneficiaries and 71.66 per cent

non-beneficiaries of the respondents agree that the village can be made self-dependent in the agriculture sector through the ATMA programme. 73.33 per cent beneficiaries and 63.33 per cent non-beneficiaries of the respondents agree that new and improve farmers can be gated with the facilities obtained from the ATMA programme. 75.00 per cent beneficiaries and 65.00 per cent non-beneficiaries of the respondents agree that farmers on given knowledge about certain crops through the ATMA programme. 73.33 per cent beneficiaries and 63.33 per cent non-beneficiaries of the respondents agree that the ATMA programme helps farmer as charity. The similar finding is in the line of the finding of Kumari and Bishnoi. (2020)

Table 3: Distribution of the beneficiaries according to their overall attitude towards services of ATMA

Category	Beneficiaries		Non- Beneficiaries	
	Frequency	Percentage	Frequency	Percentage
Low (15-25)	13	21.67	22	36.67
Medium (26-35)	32	53.33	27	45.00
High (36-45)	15	25.00	11	18.33
Total	60	100	60	100

It is evident from the above table that among beneficiaries 53.33 per cent of the respondents have medium levels of attitude, 25.00 per cent have high levels of attitude, and only 21.67 per cent have low level of attitude. Similarly, non-beneficiaries 46.66 per cent of respondents have low levels of attitude, 36.67 per cent have medium levels of attitude, and only 16.67 per cent have high levels of attitude towards services of ATMA. Similar finding is also reported by Shamshadunnisa *et al.*, (2018) [9].

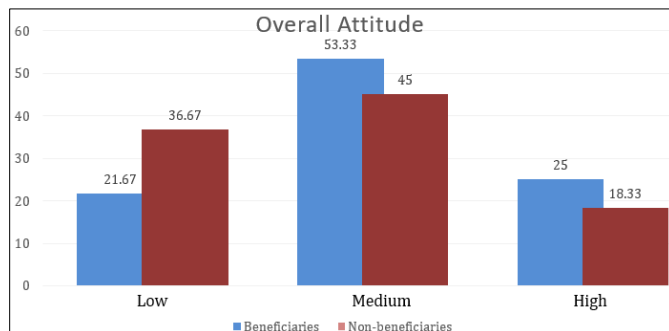


Fig 1: Overall attitude of respondent on its beneficiaries and non-beneficiaries.

Table 4: Association between selected independent variables with attitude of farmers towards activities of ATMA programmes on its beneficiaries and non-beneficiaries

Independent variables	Beneficiaries		Non- Beneficiaries	
	Value	Significance	Value	Significance
Age	0.859	S	0.291	S
Caste	0.060	NS	0.079	NS
Family type	0.956	S	0.527	S
Family size	0.999	S	0.565	S
Education	0.768	S	0.244	S
House pattern	0.209	S	0.079	NS
Occupation	0.075	NS	0.060	NS
Annual income	0.949	S	0.840	S
Land holding	0.974	S	0.847	S
Social participation	0.910	S	0.249	S
Extension contacts	0.982	S	0.759	S
Economic motivation	0.159	S	0.036	NS
Management orientation	0.998	S	0.670	S
Innovativeness	0.144	S	0.095	NS

*- Significant at 0.05% probability level 0.197

** -Significant at 0.01% probability level 0.257

NS=non-significant

Table 4 shown that the variables for beneficiaries, age, family type, family size, education, house pattern, land holding, annual income, social participation, extension contacts, economic motivation, management orientation and innovativeness were found positive and significant correlation with overall attitude towards ATMA services whereas positive and significant of beneficiaries and non-beneficiaries found negative and non-significant correlation with overall attitude towards services of ATMA.

Conclusion

It was concluded that the majority of respondents, both beneficiaries and non-beneficiaries, were young age and had a primary level of education. Most of the respondents belong to nuclear family and owned 1-2 hectares of land. Both beneficiaries and non-beneficiaries of management orientation was medium level. Both groups had high levels of economic motivation and innovativeness. Attitude of the beneficiaries and non-beneficiaries about services of ATMA programme was observed to be at a medium level moreover, it was found that age, family size, education, annual income,

extension contact, social participation and management orientation were positively and significantly correlated with the attitude of farmers towards services of ATMA activities. To improve the attitude of farmers towards ATMA activities, the government should provide training, demonstrations, infrastructure facilities and inputs.

References

1. Ayenew W, Lakew T, Kristos EH. Agricultural technology adoption and its impact on smallholder farmer’s welfare in Ethiopia. African Journal of Agricultural Research. 2020;15(3):431-445.
2. Chandra HSN, Kadian KS, Kale RB. Identifying the Factors Affecting Coordination among Different Agencies with ATMA in Andhra Pradesh, India. International Journal Current Microbiology Applied Science. 2017;6(11):890-899.
3. Deka C, Mishra P, Baruah R. Organizational Level Performance of Agricultural Technology Management Agency (ATMA) under New Extension Reforms in the

- State of Assam. Asian Journal of Agricultural Extension, Economics & Sociology. 2017;19(02):1-7.
4. Gardhariya KV, Pandya RD, Bhuvra RM, Dhodia AJ. Role Perception and Role Performance of Farm School Beneficiaries Working Under ATMA OF South Gujarat. International Journal of Agriculture Sciences. 2016;8(58):3197-3198.
 5. Gonshtwad BM, Mokhale SU, Jat K, Deshmukh AN. Attitude of beneficiaries towards Agriculture Technology Management Agency (ATMA). Journal of Agriculture. 2020;11(2):298-300.
 6. Kharade PP, Patel JK. Participant Farmers Perception about Effectiveness of ATMA. International Journal Current Microbiology Applied Science. 2022;11(09):252-260.
 7. Kumar N, Yadav SR, Mishra A, Mishra S. Knowledge Level of ATMA and Non-ATMA Farmers about Improved Practices of Wheat Cultivation in Barabanki (U.P). International Journal Current Microbiology Applied Science. 2020;9(02):2609-2615.
 8. Ninama N, Patel A. Development of Scale to Measure Knowledge of Farmers about Farmer Interest Group (FIG) under ATMA Project. International Journal Current Microbiology Applied Science. 2021;10(07):787-798.
 9. Shamshadunnisa S, Varadaraju GM, Riyaz M, Ahmed T. Attitude of Extension Field Functionaries towards Agriculture Technology Management Agency in Southern Karnataka. International Journal Current Microbiology Applied Science. 2018;7(11):2547-2551.
 10. Subba R, Mukhopadhyay SD. Impact of ATMA (Agricultural Technology Management Agency) in Changing Knowledge, Skill and Adoption Behavior of Farmers in Sikkim. International Journal Current Microbiology Applied Science. 2019;8(03):1493-1505.